

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: MAINTENANCE STEP, RH
Job Number	: 35446		
Estimate Number	: 11284		
P.O. Number	: <i>N/A</i>	Part Number	: D3436044
This Issue	: 10/30/2007 S.O. No. : <i>N/A</i>	Drawing Number	: D3436 REV A
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: <i>N/A</i> Type : LARGE FAB ASSY	Drawing Revision	: A
Previous Run	: <i>N/A</i>	Material	: <i>N/A</i>
Written By	: <i>[Signature]</i>	Due Date	: 11/6/2007 Qty: 2 Um: Each
Checked & Approved By	: <i>[Signature]</i>		
Comment	: Est A 05.05.11 New Issue KJ/JLM		

Job Number:



1.0	D34361	Clamp
-----	--------	-------



## Clamp

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

1 D3436-1 Clamp B35447

11 07-11-01 (2)

2.0	D34364	Right Step
-----	--------	------------



### RH Step

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

1 D3436-4 LH Step B23360

PD 07-11-01 (2)

3.0	D34365	Bushing
-----	--------	---------



## Bushing

Pick: AS 350-92-63 → M 17679

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

4 D3436-5 Bushing

PD 07-11-01 (2)

40 D34367 Cap



Cap

Pick:

Qty	Part Number	Description	Batch
-----	-------------	-------------	-------

1 D3436-7 Cap b35098

PD 07-11-01 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/11/07	3-0	wrong Bushing were welded on the in place of D3436-5. They had the wrong ID.	02.11.07	Drill out the Replacemt Bushing Inside Dia. to accomodate for a AN4 Bolt. <i>Lower speed 2 not</i>	07/11/07	07.11.07	07.11.07	07/11/07
				Refer to NCR 249  Apply touch up areas with white Emron paint.				07/11/07
		* see Last Page for more clear ncr Description	02.11.07	Re weld two Bushing AS per QS 2004	PD 07-11-07	07/11/07	07.11.07	07/11/07

NOTE: Date & initial all entries

Re paint coat  
AS per QS 2004  
Reinstall D3436-9

07-11-07

07/11/07

Date: Tuesday, 10/30/2007 2:49:19 PM

User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MAINTENANCE STEP, RH

Job Number: 35446

Part Number: D3436044

Job Number:



Seq. #:

Machine Or Operation:

Description:

5.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bushings D3436-5 and clamp D3436-1 using welding Jig DT8772 and Dwg D3436 Dwg Rev:

A  
Qty Part Number Description Batch  
A/RN/A 4130 Welding Rod M100015

Weld right step D3436-4 using welding Jig DT8773 and Dwg D3436 Dwg Rev: A

Qty Part Number Description Batch  
A/RN/A 4130 Welding Rod M100015

Weld cap D3436-7 as per Dwg D3436 Dwg Rev: A

Qty Part Number Description Batch  
A/RN/A 4130 Welding Rod M100015

PD 07-11-01 (2)

6.0

BAND SAW

BAND SAW



Comment: BAND SAW

Slit part D3436-041 on bandsaw as per Dwg D3436

PD 07-11-01 (2)

7.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

A 07/14/01 (1)

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

A 07/11/02 (X1)

9.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Deburr

PD 07-11-02 (1)

10.0

POWDER COATING

POWDER COATING



M10 S 914



(X)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.2) as per QSI 005 4.3

Apply black anti-skid paint as per Dwg D3436 and QSI 005 4.4

M-11 07/11/05



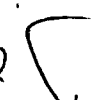


Wing walk : ~106030

FX 07/11/06 (1)

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3436-044 PAR #: N/A Fault Category: Prod / Eng. Ass <sup>LARGE</sup> NCR: Yes No DQA: 12 Date: 07/11/07  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>35446</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
7/11/07	#50	A small piece of debris (foreign object) was found during inspection. when the welder tried to remove it but doing so he created another hole and ground too much. the assembly is scrap	 ASER	Scrap entire assembly NO replace AND replace	07-11-07 	 Hulcz	 GAYEN	 Hulcz
07/11/08	12	2 prod D3436-9 were scrap		Scrap - destroy	80 07/11/08			

NOTE: Date & initial all entries

Date: Tuesday, 10/30/2007 2:49:19 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MAINTENANCE STEP, RH

Job Number: 35446

Part Number: D3436044

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

FL 07/11/06 ⑦

12.0

D34369

Pad



Comment: Qty.: 2.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pad

Install pad using contact cement as per manufacturer's instructions and Dwg D3436

Dwg Rev: A

Pick:

Qty Part Number Description Batch

2 D3436-9 Pad

A/R N/A

Contact Cement

B23359  
M102565

MF 07.11.06 ①

13.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 07/14/06

14.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: PPP 35417

AS 07/11/07 ①

15.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

AS 11/1/08 ①  
~~07/11/07~~

Job Completion



U 07.11.07

12150

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

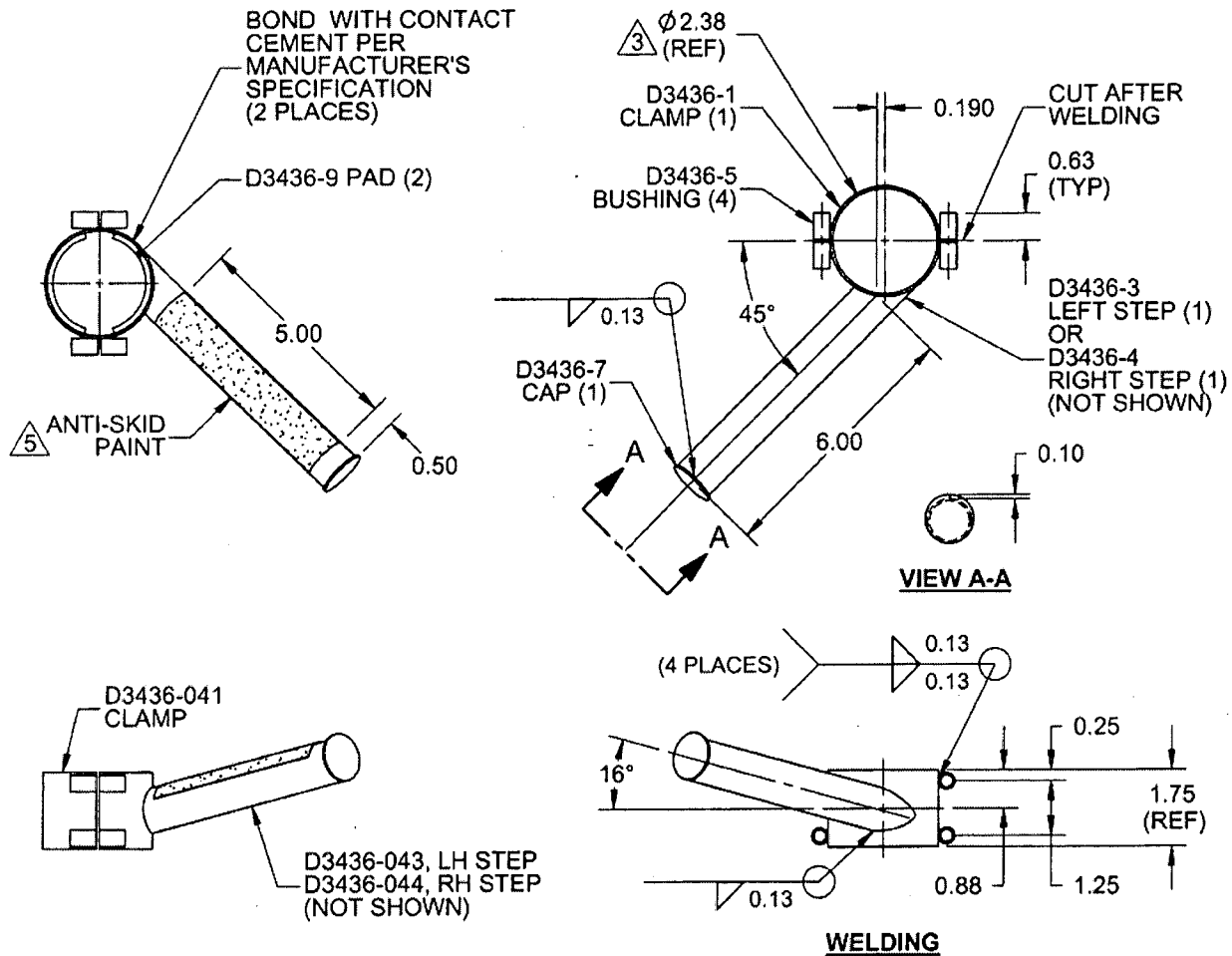
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**DART**

DESIGN MB	DRAWN BY MB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED //	APPROVED //	DRAWING NO. <b>D3436</b>	REV. A SHEET 1 OF 4
DATE <b>05.04.28</b>		TITLE <b>MAINTENANCE STEP</b>	SCALE 1:1
A	05.04.28	NEW ISSUE	

**NOTES:**

- 1) POSITION PARTS AS PER JIGS DT8772 AND DT8773
- 2) WELD PER DART QSI 004
- 3) FILLET BOTH TOP AND BOTTOM EDGES OF CLAMP ALONG 2.38 I.D. SECTION TO 0.03 RADIUS TO PREVENT SCORING AND SCRATCHING OF SKID CROSS TUBE
- 4) FINISH: POWDER COAT WHITE GLOSS (4.3.5.2) PER DART QSI 005 4.3
- 5) APPLY BLACK ANTI-SKID PAINT AS SHOWN PER DART QSI 005 4.4
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 7) ALL DIMENSIONS ARE IN INCHES

**RELEASED**

05.05.27

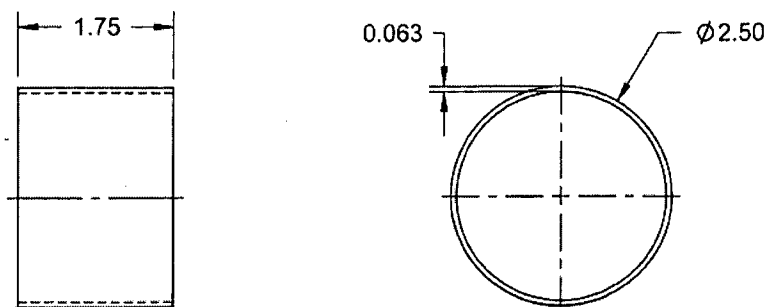
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 35446

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN MB	DRAWN BY MB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3436</b>	REV. A SHEET 2 OF 4
DATE <b>05.04.28</b>	TITLE <b>MAINTENANCE STEP</b>		SCALE 1:2



#### **D3436-1 CLAMP**

- 1) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T-6736, AMS 6371, 6360, 6361, 6362, 6373 OR 6374 (REF. DART SPEC. M4130N-T2500W063)



#### **D3436-5 BUSHING**

- 2) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T-6736, AMS 6371, 6360, 6361, 6362, 6373 OR 6374 (REF. DART SPEC. M4130N-T0375W049)

#### **D3436-1/ -5, GENERAL NOTES:**

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) ALL DIMENSIONS ARE IN INCHES  
5) BREAK ALL SHARP EDGES 0.005 TO 0.010

**RELEASED**

05-05-27  
SHOP COPY  
RETURN TO

ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 35446

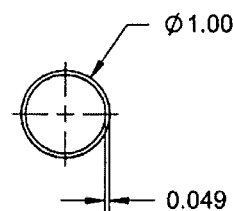
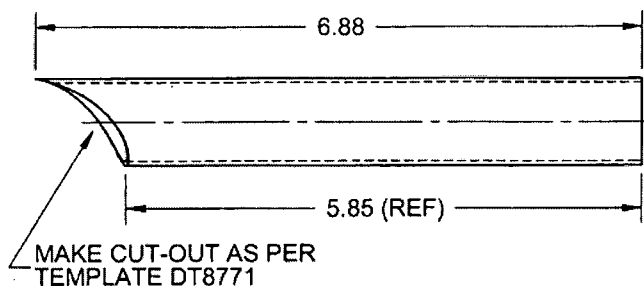
**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.





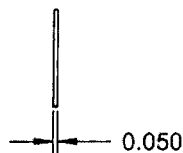
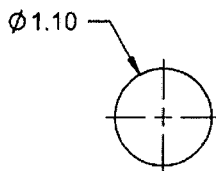
DESIGN MB	DRAWN BY MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3436	REV. A SHEET 3 OF 4
DATE 05.04.28		TITLE MAINTENANCE STEP	SCALE 1:2



#### **D3436-3 LEFT STEP**

(D3436-4 RIGHT STEP - OPPOSITE, NOT SHOWN)

- 1) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T-6736, AMS 6371, 6360, 6361, 6362, 6373 OR 6374 (REF. DART SPEC. M4130N-T1000W049)



#### **D3436-7 CAP**

- 2) MATERIAL: AISI 4130N STEEL SHEET PER MIL-S-18729, AMS6350 OR AMS 6351 (REF. DART SPEC. M4130N-S050)

#### **D3436-3/-7, GENERAL NOTES:**

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) ALL DIMENSIONS ARE IN INCHES  
5) BREAK ALL SHARP EDGES 0.005 TO 0.010

**RELEASED**

05-05-2010 COPY

RETURN TO  
ENGINEERING

UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE

WORK ORDER

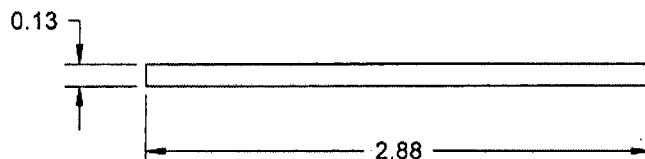
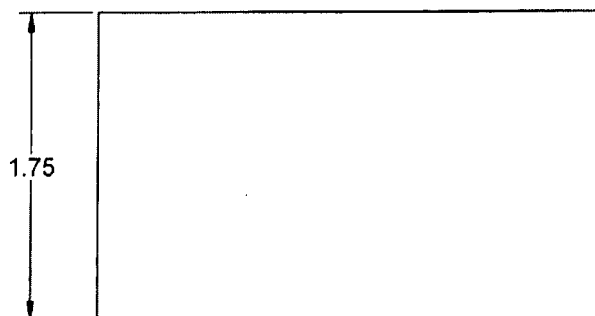
NO. 35446

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN MB	DRAWN BY MB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3436</b>	REV. A SHEET 4 OF 4
DATE <b>05.04.28</b>		TITLE <b>MAINTENANCE STEP</b>	SCALE 1:1



**RELEASED**

05.05.27 *[Signature]*

**D3436-9 PAD**

**NOTES:**

- 1) MATERIAL: 60 DUROMETER NEOPRENE SHEET, 1/8" THICK  
(REF. DART SPEC. M-NEO60-S.125)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

SHOP COPY  
RETURN TO  
ENGINEERING  
INCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **35446**


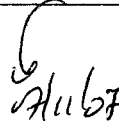


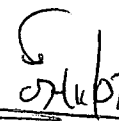
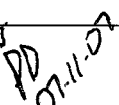


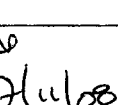
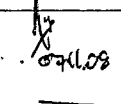
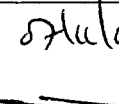
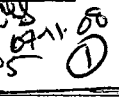

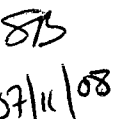
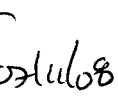

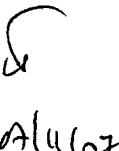
**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
07/11/07	# 3.0	The wrong Bushings were used in Replace of D3436-5. The Replant Bushing Had the wrong ID.		Drill out Replant bushing to have the correct ID. to Accommodate for A Arm Bolt	 07/11/07	 07/11/08	 07/11/08	 07/11/07
				Replace two bushings that were scrap during drilling	 07/11/07			
		Refer to NCR249.		Re weld AS per QS2 004 B# 23557	 07/11/07	 07/11/08	 07/11/08	 07/11/07
				Re Powder coat AS per QS2005	 07/11/08			
				Replace both D3436-9 B# 23357 Contract cement M102565	 07/11/08	 07/11/08	 07/11/08	 07/11/07

NOTE: Date & initial all entries